

posterior valve very small with a subcentral inconspicuous vertex at the anterior third; anterior valve with nine, middle valves with two, posterior valves with two slits, the interior lines of which are marked by a row of minute pores; the middle of the valves on each side of the median suture conspicuously porous internally. Length in alcohol 8, maximum breadth 6 mm. U. S. Nat. Mus. Cat. No. 383018.

St. Paul Island, Bering Sea.

This differs from the type of the genus *S. brandtii* Middendorff in color, form, characters of the girdle and depression of the body; *S. brandtii* has nine slits in the posterior valve which is proportionately larger. If additional specimens confirm its peculiarities, *S. multicolor* may perhaps form a special subdivision of the genus.

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A NEW SPECIES OF PYRAMIDULA FROM ALABAMA AND NOTES ON  
P. CUMBERLANDIANA WITH NEW VARIETIES.

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BY GEO. H. CLAPP.

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PYRAMIDULA PICTA n. sp. Pl. I, Fig. 4.

Shell thin, the color markings showing through, broadly umbilicate, the umbilicus dome-shaped, exhibiting all of the whorls to the apex and about one-fourth the diameter of the shell; whorls very convex above and below with a sharp *perfectly smooth, white* carina; apex delicately granulated for nearly a complete whorl before the ribs begin to show, first  $2\frac{1}{2}$  whorls rounded then a distinct *ribbed* carina is formed and the ribbing continues, getting gradually weaker and finally disappearing on the penultimate whorl. There is a distinct impressed line above the carina on the upper whorls. Ribs weak and almost obsolete on the body whorl. Body color a delicate cream tint with irregular, chocolate-brown blotches which stop at the carina; below a row of squarish blotches immediately below the carina and a second row of narrow flame-like markings extending, faintly, into the umbilicus. Lip thin; aperture very oblique, much wider than high. Whorls 6.

Greater diameter  $20\frac{1}{2}$ , lesser  $18\frac{3}{4}$ , altitude 9 mm. Aperture  $9 \times 7$  mm. Type.

Greater diameter 20, lesser  $18\frac{1}{2}$ , altitude 10 mm.

Greater diameter 18, lesser 17, altitude 10 mm. A very convex shell.

These shells, over 50 in number, were collected by the late Herbert H. Smith at a place called "Buck Creek Cove" or "No Business Cove," about 3 miles north of Anderson, Franklin Co., Tenn., in 1906. Types No. 7101 of my collection, paratypes in the collections of the Academy of Natural Sciences, Philadelphia, and of Dr. Bryant Walker, Detroit, Mich.

In shape, sculpture and markings, but particularly in the *perfectly smooth* carina, this species stands out from all others of the group; it is the most distinctly marked and richest in coloring of all of the *Pyramidulas*.

P. CUMBERLANDIANA (Lea). Pl. I, Figs. 1. Sewanee, Tenn.

The original description and figure of this species, Trans. Am. Phil. Soc., VIII, 229, pl. VI, fig. 61, are very good and agree exactly with the shells found at Sewanee, Tenn., by Bishop Elliott and later collectors. Lea's original locality was "Cumberland Mountains, near Jasper, Tenn.," which is about 20 miles southeast of Sewanee. I have not seen the type but if, as Dr. Binney says, the Sewanee shells are the same, both Lea and Binney failed to note that the ribs become *much stronger on the carina* giving a saw-tooth effect.

Dr. Binney, Terr. Moll., II, p. 216, gives the size as "Diameter three-fourths of an inch; axis one-fourth of an inch," or about  $19 \times 7$  mm. W. G. Binney, Manual, p. 258, says: "Greater diameter 15, lesser 13 mm.; height 5 mm." Of 42 shells in my collection, over half of them from Sewanee, and two labeled "E. Tenn. (Elliott-Bland)" from the Redfield collection, the largest run from 16 to 17 mm. diameter. H. H. Smith collected a few typical shells at Paint Rock, Jackson Co., Ala.

At Woodville, Jackson Co., Ala., Mr. H. E. Sargent found a form of *cumberlandiana* with slightly weaker ribs above and below and with the upper whorls less shouldered, but it is hardly

distinct enough to be separated. The largest of the Sargent shells that I have seen measures, gr. diam.  $18\frac{1}{2}$ , less.  $16\frac{1}{2}$ , alt. 7 mm., whorls  $5\frac{3}{4}$ , umbilicus less than one-third of the diameter of the shell. A single shell collected by H. H. Smith in the same locality measures  $19\frac{3}{4} \times 8\frac{1}{2}$  mm., whorls 6.

In *cumberlandiana* there is a single row of small, faint, squarish, brown markings just below the carina on the base; in the Woodville shells these spots are larger and much darker. Figs. 2. Woodville, Ala.

P. CUMBERLANDIANA ALABAMA n. var. Pl. I, Figs. 3. Gurley, Ala.

Differs from the type by its larger size, *much finer and flatter ribs* and more convex shape; carina white, sharp, but less pinched than in the type and the ribs on the carina much lower and less accentuated. Ground color lighter than in the Sewanee shells and markings darker. There is a single row of squarish flames just below the carina on the base. Umbilicus about one-fourth the diameter of the shell.

Gr. diam.  $21\frac{3}{4}$ , less.  $19\frac{1}{2}$ , alt.  $9\frac{1}{2}$  mm. Aper.  $9\frac{1}{2} \times 8$  mm. Whorls 6. Type.

Gr. diam.  $21\frac{1}{4}$ , less.  $18\frac{3}{4}$ , alt. 10 mm. Aper.  $9 \times 7$  mm. Whorls 6. Huntsville.

Collected by H. H. Smith in 1905 on Vincent Mountain, near Gurley and on Smithers Mountain, 5 miles N. W. of Huntsville, both in Madison Co., Ala. Types No. 7132 of my collection (Gurley) and paratypes in the collections of the Academy of Natural Sciences, Philadelphia, and Dr. Bryant Walker, Detroit, Mich.

P. CUMBERLANDIANA COLUMBA n. var. Pl. I, Fig. 5. Dove, Tenn.

Like the type in sculpture, color and markings, but *not pinched at the carina*. Heavily ribbed above and on the carina, but below the ribs are much finer, about 2.1. There is a single row of chocolate brown, diagonal markings immediately below the carina.

Gr. diam.  $18\frac{1}{2}$ , less.  $16\frac{1}{2}$ , alt. 8 mm. Aper.  $7\frac{1}{2} \times 7$  mm. Whorls 5.

Near Dove, Marion Co., Tenn., on "East slope of Battle Creek valley among rocks." Collected by H. H. Smith in 1906. Types No. 7100 of my collection, paratypes in collections of the Academy of Natural Sciences, Philadelphia, and Dr. Bryant Walker, Detroit, Mich.

Had this form been found in any other region it might equally well have been considered a variety of *alternata*, but being found in the region of *cumberlandiana* I think it best to make it a variety of that species.

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#### ACHATINELLA HUNTING IN NORTHWESTERN OAHU.

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We take the liberty of printing extracts from a letter received some time ago from Mr. Irwin Spalding of Honolulu, in explanation of the interesting photograph of living *Achatinellas* reproduced on plate II. As a general rule, these snails are found "sleeping" by day, on the under side of a leaf as in the picture, under loose bark, or in a knot hole. They are doubtless active chiefly by night.

Those who have used the monograph in the *Manual of Conchology* know that many species and color-races once abundant are now rare, some doubtless extinct. Dr. Newcomb and Mr. Gulick collected fine tree-shells in quantity where forests are now but a tradition, and their shells are often of color-patterns strange to the modern collector. It is most gratifying to learn that some of these long-lost species are being turned up at higher levels. Mr. Spalding writes as follows:

"So many good things have come my way along the land-shell line these last two months that I really don't know how to begin and tell you all about them. To start in with, I spent my three weeks vacation this year collecting on Oahu, started in at Opaepa and worked around through Waimea, Pupukea, Waialeale, Kahuku, Leie, finally landing up at Hauula. Only 2367 *Achatinella* and *Amastra* for the trip, but here is the best of it all, found four of the supposed extinct species, *A. bulimoides*; *A. emersoni*; typical old-time, banded mottled *A. curta*, and last but not least, *A. —?*; the latter to be seen in the ac-